REMARKS

In the Office Action, claims 32-43, 45-49, 51-58, 93 and 94 were rejected. Reconsideration and allowance of all pending claims are requested.

Non-rejected Claims

Applicants respectfully submit that in the Response filed on April 26, 2005, Applicants had brought to the Examiner's notice that arguments either rejecting or allowing claims 44 and 50 were not present in the Office Action mailed on January 26, 2005, and requested the Examiner to address these claims. However, Applicants wish to point out that the Examiner has again inadvertently overlooked these claims. Accordingly, Applicants have not addressed rejection of those claims here. In the event, the Examiner maintains any rejection of pending claims, Applicants would request the Examiner to formulate a position as to these claims in a subsequent non-final Office Action.

Rejections Under 35 U.S.C. §103

The Office Action summarizes claims 32, 41-43, 47, 48 and 94 as rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 5,179,284 issued to Kingsley et al. (hereinafter "Kingsley"). Further, the Office Action summarizes claims 33-40, 45, 46, 49, 51 and 93 as rejected under 35 U.S.C. §103(a) as being unpatentable over Kingsley and further in view of U.S. Patent 6,781,131 issued to Kusuyama et al. (hereinafter "Kusuyama"), U.S. Patent 6,663,973 issued to Lee et al. (hereinafter "Lee"). Furthermore, the Office Action summarizes claims 52-58 as rejected under 35 U.S.C. §103(a) as being unpatentable over Kingsley, Kusuyama and Lee and further in view of U.S. Patent 5,132,539, Kwasnick et al. (hereinafter "Kwasnick").

Applicants respectfully submit that all independent claims, i.e., claims 32, 93 and 94 recite an X-ray detector assembly in generally similar language. The claims recite, *inter alia*, a detector substrate having a plurality of contact pads, and a scintillator

material disposed on a detector matrix array, which in turn is disposed on the detector substrate. Further, the claims recite an encapsulating coating disposed on the scintillator material. The encapsulating coating is also disposed on and contacts a first portion of the detector substrate.

The Examiner acknowledged that although Kingsley fails to disclose that the encapsulating coating contacts the detector substrate. However, because Kingsley discloses that the encapsulating coating is present to provide a smooth surface to which the moisture barrier layer can adhere, and Kingsley discloses that the moisture barrier layer is disposed at least over the top of the scintillator array, the Examiner argued that it follows that when a columnar scintillator array is present and the moisture barrier layer is also disposed on the sides of the scintillator crystals, then the encapsulating layer which is present underneath the moisture barrier layer will in fact be disposed not only on the top of the scintillating array but also on the sides of the crystals, and therefore will be contacting the detector substrate.

Kingsley fails to disclose a moisture barrier layer which is disposed on the sides of the scintillator crystal and contacts the detector substrate

Applicants respectfully submit that as illustrated in the sole figure of Kingsley and as recited in a passage at col. 4, lines 38-43, Kingsley discloses a moisture barrier layer which is disposed on the sides of the scintillator crystal. Moreover, this moisture barrier layer is enclosed within enclosure walls which are coupled to the photodetector array. Applicants respectfully submit that because the photodetector array extends to at least the enclosure walls on either side of the scintillator crystal, it is not possible for the moisture barrier layer, which lies in the region between the scintillator and the enclosure walls, to contact the detector substrate. The cited passage reads:

> Moisture sealant layer 54 advantageously extends around the outer edges or sidewalls 38 of scintillator 30 along the length of the scintillator from first surface 34 to the second surface 36. Enclosure walls 58 disposed on

> photodetector array 20 run substantially parallel to outer edges 38 of the scintillator.
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> Kingsley, col. 4, lines 38-43.

Hence, the moisture barrier layer of Kingsley is coupled to only the photodetector array and is *not* coupled to the detector substrate.

On the other hand, the encapsulating coating of claims 32, 93 and 94 is coupled to the detector substrate as described in various passages of the application. For example, passages cited at paragraph [0034], lines 1-3, paragraph [0054], lines 2-7, and paragraph [0055], lines 11-17 disclose an encapsulating coating which is disposed on the scintillator and coupled to the detector substrate, as claimed. The cited passages read:

> In another embodiment of the present invention, the encapsulating coating 4 of Fig. 6, further comprises a first encapsulating coating tier 122 of Fig. 12 disposed on scintillator material 3 of Fig. 6 and a detector substrate first portion 150.
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> * * *
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> Fig. 5 alternatively comprises disposing a first encapsulating coating tier 122 as shown in Fig. 12 on scintillator material 3 of Fig. 5, detector substrate first portion 150, detector substrate second portion 160, interface 17 and contact pads 21. Next, an inner reflective tier 124 as shown in Fig. 12 is deposited on first encapsulating coating tier 122; and then a second encapsulating coating tier 126 is disposed on inner reflective tier 124.
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> * * *
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> Typically, encapsulating coating 4 is initially deposited on scintillator material 3, detector substrate first portion 150, detector substrate second portion 160, detector substrate adhesive bond area 7, contact pads 21 and non-active underside 200 of detector substrate 1. Encapsulating coating 4 is then removed from detector substrate adhesive bond area 7, detector substrate second portion 160, contact pads 21, and non-active underside 200 of detector substrate 1.

Hence, unlike this encapsulating coating of claims 32, 93 and 94, which is coupled to the detector substrate, the moisture barrier layer of Kingsley is coupled to the photodetector array and not to the substrate.

Further, Applicants respectfully submit that the other references, namely Kusuyama, Lee and Kwasnick, have been reviewed carefully and they do not seem to obviate the deficiencies of the Kingsley reference with respect to independent claims 32, 93 and 94. More particularly, Kusuyama, Lee and Kwasnick do not teach an encapsulating coating as disclosed and claimed in the present application. In other words, they do not teach an encapsulating coating which is disposed on the scintillator material and is also coupled to the detector substrate.

With regards to claims depending from claim 32, these claims depend directly or indirectly from an allowable base claim, and are therefore considered to be equally allowable.

Conclusion

In view of the remarks and amendments set forth above, Applicants respectfully request allowance of the pending claims. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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Patrick S. Yoder
Reg. No. 37,479
FLETCHER YODER
P.O. Box 692289
Houston, TX 77269-2289
(281) 970-4545